
A New Name and a New Species in *Matelea* (Apocynaceae, Asclepiadoideae) from Brazil

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ABSTRACT. The new name *Matelea endressiae* Goes & Fontella is proposed to replace *Gonolobus cordatus* Malme from Brazil. A new species, *M. demuneri* Goes & Fontella, from Espírito Santo State, Brazil, is described and illustrated. *Matelea demuneri* is similar to *M. endressiae* and *M. maritima* (Jacquin) Woodson subsp. *cearensis* (Malme) Fontella, but it is distinguished from the first by its shorter pedicel and corolla tube, pubescent corona, and follicles with short projections, and from the second by its mixed indumentum, inflorescence with peduncle, green-purple corolla, rounded 5-lobed corona, shorter pollinia, and follicles with short prickles.

RESUMO. Um novo nome, *Matelea endressiae* Goes & Fontella, é apresentado como substituto para *Gonolobus cordatus* Malme, e uma nova espécie, *M. demuneri* Goes & Fontella, do Estado do Espírito Santo, Brasil, é descrita e ilustrada. *Matelea demuneri* é similar a *M. endressiae* e *M. maritima* (Jacquin) Woodson subsp. *cearensis* (Malme) Fontella, porém se distingue da primeira por apresentar pedicelos e tubo da corola menores, corona pubescente e folículos com projeções menores, e da segunda, por apresentar indumento misto, inflorescências pedunculadas, corola verde-arroxeadada, coroa aneliforme 5-lobada, polínias menores e folículos com projeções menores.

Key words: Apocynaceae, Asclepiadoideae, Brazil, Espírito Santo, IUCN Red List, *Matelea*, Santa Teresa.

The genus *Matelea* Aublet comprises approximately 180 species (Stevens, 2001) distributed from the United States into South America. In Brazil, there are about 44 specific and infraspecific taxa found in primary and secondary rainforest, disturbed areas, cerrado, and campos rupestres formations.

As a result of a study of Asclepiadoideae occurring in Santa Teresa, Espírito Santo State, Brazil, a taxonomic novelty, *Matelea demuneri* Goes & Fontella, is recorded, and a new name, *M. endressiae* Goes & Fontella, is established.

***Matelea endressiae* Goes & Fontella, nom. nov.**
Replaced name: *Gonolobus cordatus* Malme, Ark. Bot. 21A(2): 6. 1927. TYPE: Brazil. Ceará: Cedro, 27 Feb. 1910, A. Loefgren 62 (holotype, S).

The type specimen, A. Loefgren n° 62, was identified by Malme as a new species of *Gonolobus* Michaux, as *G. cordatus*. However, this species does not present dorsal anther appendages, which is the main distinguishing characteristic between species of *Gonolobus* and *Matelea* (Woodson, 1941). Because the combination *M. cordata* (Brandege) Woodson (1941) previously existed, having *Microdactylon cordatus* Brandege (1908) as its basionym, the new combination could not be made; therefore, the name *Matelea endressiae* is here proposed as a replacement name for *G. cordatus*. The new epithet honors Mary Endress, of the Institute of Systematic Botany, University of Zurich, Switzerland.

***Matelea demuneri* Goes & Fontella, sp. nov.** TYPE: Brazil. Espírito Santo: Santa Teresa, São João de Petrópolis, Barra de Santo Hilário (Paulo Zanette-dono), 10 May 2000, V. Demuner 1015, E. Bausen, W. Pizziolo & L. Kollmann (holotype, MBML; isotype, R). Figure 1.

Species nova *Mateleae endressiae* Goes & Fontella affinis, sed ab ea pedicellis et tubo corollae minoribus, corona pubescenti et fructibus aculeis brevibus eburneis armatis praecipue differt.

Vines, with older stems woody and thick, ridged, spongy, pale yellow cork, glabrous; roots tuberous, latex white, internodes 11.5–17 cm; young stems with mixed indumentum, long trichomes moderately dense, 1.2–2 mm, straight, translucent yellow, shorter glandular trichomes dense, red-brown, 0.07–0.15 mm. Leaves simple, opposite, blades ovate to cordate, 6–14.5 × 3–9.2 cm, apex acuminate, base cordate, adaxially with mixed indumentum, sparse long trichomes, straight, translucent yellow, and shorter glandular trichomes, dense, red-brown, abaxially with moderately dense short glandular trichomes, red-brown, and with mixed indumentum on veins; adaxial

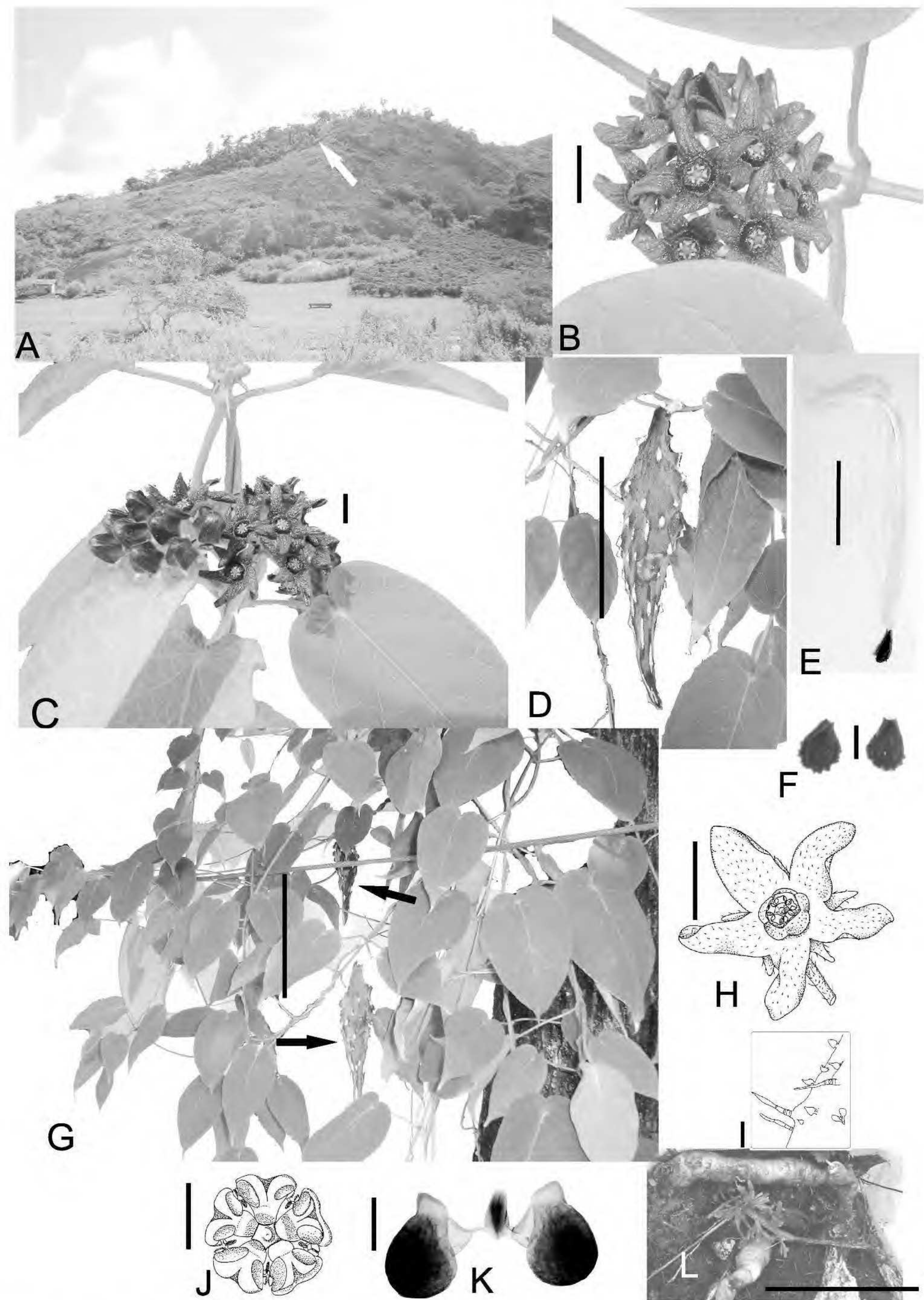


Figure 1. *Matelea demuneri* Goes & Fontella. —A. Habitat, ca. 30 km north of Santa Teresa seat, on the property of Paulo Pascoal Zanetti. The arrow indicates the type locality, on a rocky slope at the forest edge, in an open, dry, and sunny area. —B. Flowering branch. —C. Flowering branch, with post-anthesis flowers and buds just preceding anthesis. —D. Fruit, note the short prickles. —E. Seeds and coma. —F. Seeds, note the irregularly crenate margin. —G. Habit, with two mature fruits (arrows). —H. Flower, frontal view, showing corona and gynostegium. —I. Mixed indumentum with sparse long trichomes and shorter glandular trichomes. —J. Gynostegium, apical view. —K. Pollinarium. —L. Roots. Scale bars: B, C = 6 mm, D = 5 cm, E = 1 cm, F = 5 mm, G = 8 cm, H = 5 mm, J = 1 mm, K = 0.2 mm, L = 10 cm. (B–K, photographed and drawn from cultivated collection. B, C, G–K, *Goes & Barros 108b*; D–F, *Goes & Barros 108c*; L, *Goes & Barros 108a*. Line drawings by Monique Goes.)

Table 1. Morphological comparison of the new species *Matelea demuneri* with *M. endressiae* and *M. maritima* subsp. *cearensis*.

	<i>M. demuneri</i>	<i>M. endressiae</i>	<i>M. maritima</i> subsp. <i>cearensis</i>
Indumentum	mixed: long trichomes moderately dense, straight, translucent yellow, and short glandular trichomes dense, red-brown	mixed: long trichomes moderately dense, straight, translucent white, and short glandular trichomes dense, red-brown	long trichomes dense, flexuose, translucent white
Peduncle length	2–6.2 cm	4–5 cm	1–1.5 mm
Pedicele length	8–12 mm	15–20 mm	1–2 mm
Sepals	ca. 2× longer than corolla tube, linear-lanceolate	as long as corolla tube, lanceolate	ca. 2× longer than corolla tube, ovate
Corolla color	green-purple	purple	green-yellow
Corolla tube length	2.5–3 mm	4–4.5 mm	1–1.2 mm
Corolla lobe length	5.5–6 mm	7–7.5 mm	2–2.5 mm
Corona	rounded, 5-lobed, pubescent, 1–1.5 mm long	rounded, 5 crenate and 5 crenulate, glabrous, 0.75–1.2 mm long	lobes triangular, pilose, and ciliate, 0.3–0.35 mm long
Pollinia	0.28–0.32 mm long, suborbicular	0.35–0.40 mm long, suborbicular	0.6–0.65 mm long, ovate
Follicles	with short prickles, prickles 2.5–3.5 mm	with long prickles, prickles 7–9 mm	with long prickles, prickles 5–6 mm

blade with 5 or 6 colleters at base; petiole 3.5–7 cm, with similar mixed indumentum. Inflorescence umbelliform, with mixed indumentum, 8 to 11 flowers mature at one time, peduncle 2–6.2 cm, pedicel 8–12 mm, bracts 4–12 × 0.3–0.5 mm, linear or narrowly lanceolate, not persistent; calyx tube 1.2–2 mm, with 1 colleter per sinus, lobes linear-lanceolate, 3–4 × 1.5–2 mm, apex acute, green, abaxially with mixed indumentum, adaxially glabrous; corolla briefly campanulate then rotate, abaxially purple-brown, adaxially olive-green and purple at base, or orange when senescent, abaxially with sparse mixed indumentum, adaxially hispidulose, trichomes translucent yellow, 0.24–0.30 mm, corolla tube 2.5–3 mm long, corolla lobes 5.5–6 × 3.5–4 mm, patent, ovate to oblong-ovate, rugose, apex obtuse, shortly twisted; gynostegium sessile, 1–1.2 mm; corona rounded, 5-lobed fused up to the apex, black, exceeding apex of gynostegium, 1–1.5 mm, pubescent, with short trichomes moderately dense, translucent yellow; anthers trapezoidal in outline, guide rails straight, parallel, terminal appendages suborbicular, wings shorter than the dorsal part, corpusculum 0.17–0.21 × 0.05–0.11 mm, oblong, apex truncate, brown, translators 0.23–0.28 mm, pollinia 0.28–0.32 × 0.28–0.30 mm, subglobose to asymmetrically ovate or subovate, yellow, sterile and translucent at attachment; style head apex 0.5–0.8 mm wide, pentagonal, slightly concave, apex briefly mammillate, pale brown. Follicles divergent when double, fusiform, 7.5–11 × 2–2.5 cm, brown, with dense mixed indumentum, follicle apex long attenuate, base stipitate, with scattered short prickles (32 to 45 total),

prickles 2.5–3.5 mm long, 1.5–2 mm wide at middle; seeds ovate, 7–8 × 6–6.5 mm, brown, margin 0.9–1.2 mm wide, irregularly crenate on 2/3, surface slightly rugose with coma 3.5–4 cm, white.

In Goes (2007), this species was treated as “*Matelea* sp. nov. 1.”

Habitat and distribution. *Matelea demuneri* is known only from forest edges in an open, dry, and sunny area from 656 to 660 m in elevation, in Santa Teresa, Espírito Santo State. It was found growing in a small population, was collected with buds and fruits, and later flowered in cultivation.

IUCN Red List category. According to IUCN Red List criteria (IUCN, 2001), *Matelea demuneri* should be included in the category Critically Endangered (CR). However, there is not enough data to produce a precise conservation evaluation, because much of Espírito Santo State and other states of the Southeast and Northeast regions of Brazil are poorly known.

Phenology. *Matelea demuneri* was observed flowering from August to April and fruiting from November to June.

Etymology. The name of this new species pays homage to Valdir Demuner from Museu de Biologia Professor Mello Leitão, who has made important contributions with his botanical collections to our knowledge of the flora of Santa Teresa, Espírito Santo State, Brazil.

Paratypes. BRAZIL. **Espírito Santo:** Santa Teresa, Santo Antônio do Canaã, Barra do Rio Perdido, Propriedade do Sr. Paulo Pascoal Zanetti, ca. 656 m.s.m., 19 Jan. 2006,

M. B. Goes 99 & E. M. Barros (R), *M. B. Goes 100 & E. M. Barros* (MBML, R), 12 Apr. 2006, *M. B. Goes 108a & E. Barros* (R); cultivated at Sr. Alcides Goes property, in Rio de Janeiro state from *M. B. Goes 108a & E. Barros*, 13 Sep. 2006, *M. B. Goes 108b & E. Barros* (R), 9 Oct. 2006, *M. B. Goes 108c & E. Barros* (MBML, R).

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cearensis Malme; and to Eduardo Barros for his support with fieldwork at Santa Teresa.

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